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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/569,300

02/23/2006

Sadao Nishibori

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EXAMINER

BUTLER, PATRICK NEAL

ART UNIT

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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/569,300	Applicant(s) NISHIBORI ET AL.	
	Examiner Patrick Butler	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20100331</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebihara et al. (JP 08-061414; JPO abstract and machine translation relied upon for citation) in view of Nomizo et al. (US Patent Number 5,366,678) and Thiery et al. (US Patent No. 5,188,791).

With respect to Claim 1, Ebihara teaches making a cushion body using a network structure object 11 of loops of endless material (a method for producing a cushion material composed of a resin molded article having a spring structure having a three-dimensional structure with voids at a predetermined bulk density; forming the three-dimensional structure by contacting, entwining, and gathering adjacent ones of random loops or curls of solid and/or hollow filaments made from a thermoplastic resin) (see abstract; figs. 2 and 8; [0011]; [0019]; and [0034]), placing structure object 11 together with high density layer 11f into a mold half and lowering another mold half into the structure (placing the three-dimensional structure within a cavity of a female die; setting a volume of the cavity of the female-die to accommodate a stroke of a male-die in a translation into the cavity, said stroke being a distance of the translation of said male-die into said cavity to a position between a minimum strike closest to a top of said cavity

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and a maximum stroke, said maximum stroke being at a deep level within said cavity closest to a bottom thereof; adjusting a thickness of the three-dimensional structure by said translation of the male die while removably engaged with a base adapted for permanent attachment to said three-dimensional structure, into the cavity of the female die for a said stroke equal to or less than said maximum stroke; compressing the three-dimensional structure between said base and said bottom of said cavity into ... a thickness corresponding to the length of the stroke of the male-die into the female-die) (see [0037] and fig 13). Because layer 11f adopts the general shape of the lowered mold half shaping structure object 11, the layer 11f and structure object 11 would have the general same shape at the side of the lowered mold half (compressing the three-dimensional structure ... into a shape corresponding with a shape of said base). The mold is cooled, and the product is removed (hardening the three-dimensional structure by a cooling thereof) (see [0026]).

Although Ebihara teaches heating to a heat deflection temperature (see [0037]), Ebihara does not appear to expressly teach heating at least the female die to a temperature sufficiently high to soften the three-dimensional structure within the cavity of the female die.

Nomizo teaches heating a lower mold part 22 filled with thermofusible fiber within mixed cotton 14 to 200 °C to soften and compress the fiber (heating at least the female die to a temperature sufficiently high to soften the three-dimensional structure within the cavity of the female die) (see col. 4, lines 11-27 and col. 6, line 51 through col. 7, line 18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the female mold as taught by Nomizo in the process of Ebihara in order to transfer additional heat to the molded material for softening (see Nomizo, col. 6, line 51 through col. 7, line 18).

Although Ebihara teaches using a mold (see [0037] and fig 13), Ebihara does not expressly teach that the female die is made from concrete.

Thiery teaches using a concrete composition for the manufacture of molds (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select Thiery's composition for the mold of Ebihara in order to make an economical mold that is also able to withstand Ebihara's mold's mechanical stress (see Thiery, col. 1, lines 9-31).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebihara et al. (JP 08-061414 with JPO abstract and machine translation relied upon) in view of Nomizo et al. (US Patent Number 5,366,678) and Thiery et al. (US Patent No. 5,188,791) as applied to claim 1 above, and further in view of Jang (US Patent No. 5,234,638).

With respect to Claim 2, Ebihara teaches a method of making a cushion material of a certain size as previously described but does not expressly teach trimming the edge with a heat cutter.

Jang teaches cutting a non-woven material's edges to size by using a heat cutter (superfluous edges protruded from the three-dimensional structure into the stroke

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between the two mating dies are cut with a heat cutter so that the edges are cut out and open ends of edge filaments are fused together) (see col. 1, lines 36-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Jang's cutting with the cushion body of Ebihara in order to form a product cut to desired size with sealed edges (see Jang, col. 1, lines 36-43).

Response to Arguments

Applicant's arguments filed 31 March 2010 have been fully considered, but they are not persuasive.

Applicant argues with respect to the Information Disclosure Statement.

Applicant's arguments appear to be on the grounds that:

1) The Information Disclosure Statement provided 31 March 2010 includes the entirety of the cited references.

Applicant argues with respect to the 35 U.S.C. § 103(a) rejections. Applicant's arguments appear to be on the grounds that:

2) Ebihara does not teach a male die with a base which forms a part of the product.

3) Ebihara's three dimensional structure does not correspond with the shape of the base and the length of the stroke of the male die, and Ebihara fails to teach a female die made of concrete.

4) Jang fails to teach the limitation of open ends being fused together.

The Applicant's arguments are addressed as follows:

1) The information disclosure statement (IDS) submitted on 31 March 2010 is noted as considered by the Examiner.

2) As recited above, Ebihara places high density layer 11f into a mold half and lowering another mold half into the structure (see [0037] and fig 13).

3) Applicant's arguments with respect to the newly claimed limitations the three dimensional structure corresponding with the shape of the base a concrete female die have been considered but are moot in view of the new ground(s) of rejection.

3) Specifically, as recited above:

Because layer 11f adopts the general shape of the lowered mold half shaping structure object 11, the layer 11f and structure object 11 would have the general same shape at the side of the lowered mold half (compressing the three-dimensional structure ... into a shape corresponding with a shape of said base).

Thiery teaches using a concrete composition for the manufacture of molds (see abstract).

4) As acknowledged by Applicant, Jang cuts with a heat cutter sufficiently to create a sealed edges (see col. 1, lines 36-43), which is relied upon by the Examiner to establish that the fibers are fused together as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. B./

Examiner, Art Unit 1791

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1791